

## REMARKS

### INTRODUCTION

Claims 8-12, 14, 16 and 18-30 were indicated as allowed. Applicant appreciates such disposition of these claims. Claims 1-6, 13, 15 and 17 were rejected. The rejection of Claims 1-6, 13, 15 and 17 is traversed.

Claims 2 and 4 are amended and no claims are added or canceled. Hence, claims 1-6 and 8-30 are presently pending in the application:

### AMENDMENTS TO CLAIMS

Claims 2 and 4 are amended to correct clerical errors and, consequently, to include proper antecedent basis and claim dependency. No new matter is added to the application by way of these claim amendments, and no additional search or substantive consideration is warranted as a result of these amendments.

### REJECTIONS BASED ON PRIOR ART

#### Rejections under 35 U.S.C. §103(a)

In paragraph 4 of the Office Action, claims 1-6, 13, 15 and 17 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Kavanagh et al. (“*Kavanagh*”; U.S. Patent No. 5,742,813) in view of Vahalia et al. (“*Vahalia*”; U.S. Patent No. 6,389,420). This rejection is traversed.

In Claim 1, a lock data structure comprises a **version number related to a number of changes to a resource object**. It would not have been obvious to one skilled in the art to substitute a version number that is associated with metadata of a file (*Vahalia*) for a lock count in a lock object (*Kavanagh*), to arrive at the subject matter of Claim 1. A version number associated with metadata of a file (e.g., a resource object) is not analogous to a version number

associated with the content of a file. There is a distinct **difference between metadata and data**. Metadata is, generally, data about data. However, metadata is not the data itself. Hence, disclosure of a version number associated with metadata does not make obvious a version number associated with data that is different than and separate from the metadata. For example, changing the value of a field in a row of a database table does not typically or necessarily change the metadata that is associated with that field, row or table.

Furthermore, *Vahalia* discloses that a client's mere access to a file (e.g., a resource object) modifies the metadata (see claims of *Vahalia*), rather than a **change** to the resource object or file itself. In addition, the count in *Kavanagh* is for counting the number of locks in a lock object for a given class, which is unrelated to the **number of changes** to a resource object. Such differences between the cited references and the claimed subject matter show a clear disconnect between the references and the claimed subject matter. Therefore, such references do not support or establish a *prima facie* case of obviousness with respect to Claim 1.

The position of the Office Action appears to be that a combination of the cited references is motivated because (1) accessing a file modifies metadata; (2) modifying metadata changes a version number that is associated with the metadata; so it would have been obvious to (3) substitute the version number of the metadata, which is related to the number of mere accesses of the file, for a count of the number of locks granted on the file. Such logic, however, fails to consider the feature recited in Claim 1 that the version number is related to a number of **changes to the resource object** (e.g., a file). Merely contending that “Kavanagh could be modified to indicate the number of changes to the resource object [file]” (Office Action, bottom of page 3) does not establish a *prima facie* case of obviousness when the cited references do not substantiate such a position in that they do not teach, suggest or motivate any counting of the

number of changes to an object/file or any versioning related to the number of changes to the object/file.

In paragraph 2, the Office Action contends that the limitation that the “version number is related to a number of changes to the resource object since the lock data structure was generated” is a non-functional description. The relevance of that contention is unclear. There is no legal requirement for patent claims to explicitly recite the function of each and every limitation or structure that is recited in the claim. The present specification and the previous response provide ample examples of the functionality and advantages of managing and storing a version number related to changes to a resource in a lock data structure rather than in the structure of the actual resource, such as in a data structure stored in persistent storage that requires performance-intensive I/O processes.

Based at least on the foregoing reasoning, one skilled in the art would not likely infer a lock data structure as recited in claim 1, nor would one find it obvious based on the cited references. Therefore, claim 1 is patentable over the references of record and withdrawal of the rejection of claim 1 is kindly requested.

Claims 2-6 depend directly or indirectly from claim 1 and, therefore, are patentable over the references of record for at least the reasons described above in reference to claim 1. Therefore, withdrawal of the rejection of claims 2-6 is kindly requested.

MPEP 707.07(f) requires that, when a rejection is traversed, the examiner should “take note of the applicant’s argument and answer the substance of it.” This was not done with respect to the remarks regarding Claim 4 in the previous response. Therefore, these remarks are repeated below, in substance, and reconsideration is respectfully requested.

Furthermore, each of claims 2-6 recites additional features that are not taught, suggested or motivated by *Kavanagh* and/or *Vahalia*. For example, with respect to claim 4, the cited

references do not disclose or suggest (1) a lock data structure comprising a reference number, (2) setting the reference number to a predetermined initial value and, (3) in some instances, **replacing the reference number value with a sum of the value and a predetermined reference change value**. FIG. 15 of *Kavanagh*, which was alleged in the Actions to teach such a reference number in support of the rejection of claim 4, in no way discloses or suggests such a reference number that is associated with a lock and the use thereof as recited in claim 4. Furthermore, neither the specification of *Kavanagh* nor the disclosure of *Vahalia* cures this deficiency with respect to the **reference number** or the deficiency with respect to the **version number**, as already explained above. Therefore, for these additional reasons, claims 4-6 are patentable over the references of record.

Claims 13 and 15 recite a computer-readable medium with instructions and an apparatus with instructions, respectively, that cause processors to perform steps corresponding with those of Claim 1. Claim 17 recites an apparatus comprising means for performing steps corresponding with those of Claim 1. Therefore, the deficiencies in the disclosures of *Kavanagh* and *Vahalia*, which are presented above in reference to Claim 1, are equally applicable to Claims 13, 15 and 17. Therefore, these claims are patentable over the references of record for at least the reasons described above in reference to claim 1 and withdrawal of the rejection of claims 13, 15 and 17 is kindly requested

## CONCLUSION

For at least the reasons set forth above, Applicant submits that all of the pending claims (1-6, 8-30) present patentable subject matter over the art of record, including that which was cited but not applied, and are in condition for allowance. Therefore, Applicant respectfully requests the Office to issue a timely Notice of Allowance in this case. If the Examiner has

questions regarding this case, the Examiner is invited to contact Applicant's undersigned representative.

To the extent necessary, a petition for an extension of time under 37 C.F.R. §1.136 is hereby made. Please charge any shortages in fees due in connection with the filing of this paper, including extension of time fees, or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted, *s*

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